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RESULTS OF THE ARCHBOLD EXPEDITIONS. NO. 8

FOUR APPARENTLY NEW POLYPROTODONT MARSUPIALS FROM NEW GUINEA

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Identification of the *Peramelidae* and *Dasyuridae* collected by the 1933 Archbold Expedition to New Guinea being now completed, it has been found necessary to draw up the following descriptions¹ of seemingly new forms.

Colors used in description in the following pages are those of Ridgway (1912, 'Color Standards and Nomenclature'); dimensions are given in millimeters and elevations in meters.

Echymipera oriomo, new species

TYPE.—No. 104573, Amer. Mus. Nat. Hist.; male, adult; Dogwa, Oriomo River, Western Division of Papua, 30 meters; March 1, 1934; collectors, Richard Archbold and A. L. Rand. The type is a skin and skull in fair condition (basioccipital broken away).

GENERAL CHARACTERS.—A small-sized, relatively warmly colored species with strongly spinous pelage and relatively small-sized teeth.

DESCRIPTION.—Pelage with the characteristic "agouti" ticking dorsally, composed of blackish spines whose terminal 2 to 4 mm. are colored about ochraceous tawny; sides and rump with less fuscous and more tawny; scattered straw-colored hairs protruding a few mm. beyond the spines of the back; top of rostrum and of head with short spines of mixed gray and straw color; a broad band from the base of vibrissae through eye to base of ear clothed with gray spines from which the straw color is absent; cheeks straw-colored tinged with ochraceous buff; ears fuscous; tail fuscous above, whitish beneath; hands, forearms, and feet near cartridge buff or ivory yellow; entire under parts ivory yellow; soles of hind feet fuscous-pigmented, of fore feet apparently without pigment.

SKULL.—Of characteristic *Echymipera* form, but smaller over all than the *doreyana* section and with posterior palatal openings extending from the front of m^1 only as far back as the back of m^2 ; zygoma rather slender and weak; teeth very small.

DENTITION.—Incisors much smaller than in *doreyana*; i^{1-4} , 4.7 (in *doreyana*, 5.3); canines and premolars proportionately small; length crown p^4 , 2.9 (in *doreyana*, 3.3); molars, though virtually equal morphologically to those of *doreyana*, greatly inferior

¹ Descriptions of new mammals of other families have appeared in Amer. Mus. Novit., Nos. 801-804 and 810.

in size, outer margin of m^3 , 3.6 (in *doreyana*, 3.9), transverse width, m^3 , anteriorly, 3.3 (in *doreyana*, 3.6).

MEASUREMENTS (general).—Head and body, 244 mm.; tail, 67; hind feet (s.u.), 47; same (c.u.), 53; skull, basal length, 52.3; zygomatic width, 24.0, nasals, 24.3×2.4 ; palatal length, 35.2; bulla, length, 4.3; teeth (crowns), $c-m^4$, 25.3; m^{1-3} , 10.5.

This species is based upon two adult males and one young female (topotypes). In both paratypes the color is similar to that of the type. In the female, p^4 and m^4 are as yet only partly erupted.

A number of forms of *Echymipera* have been described, but so inadequately that proper comparisons could not be made on the basis of literature only. The large-toothed *doreyana*-like species are certainly distinct from *orion* and whether such forms as *cockerelli* and *rufescens* (= *keiensis*) are nearly related can be settled only after detailed examination of the types has been made and measurements of their teeth have been taken.

Phascogale rona, new species

TYPE.—No. 104005, Amer. Mus. Nat. Hist.; female, adult; Rona, Laloki River, Central Division of Papua; March 14, 1933; collectors, Richard Archbold and A. L. Rand. Type a skin and skull in fair condition (skull with occipital region broken).

GENERAL CHARACTERS.—A very small species of *Phascogale* with small feet, wide, short skull, rostrum and palate, and rather large bullae.

DESCRIPTION.—Dorsal pelage 9–10 mm., fuscous gray at base, tipped with pale whitish gray, which on the rump, sides, and thighs becomes faintly washed with cinnamon; crown darker than back, also washed with cinnamon which latter color approaches ochraceous tawny on frons and rostrum; cheeks and below ears pure ochraceous tawny; feet and hands pale whitish gray; under parts light sandy gray with darker gray bases; chin and throat light ochraceous buff; hair in pouch russet; tail brownish fuscous above, buffy beneath; ears, rather large, light fuscous. The collector reports on label "3 pairs of mammae in pouch."

SKULL.—Though very small, short and massive, zygomatics well broadened, and rather heavy; nasals scarcely broader behind than in front, their anterior parts formed somewhat as described by Jentink¹ for *naso*; postorbital processes small but distinct eminences; palate short and broad, with teeth rather crowded; a postnasal spine; anterior palatal foramen reaching almost to back of canine; bullae rather large, their diameters equal to about three quarters of their distance apart.

DENTITION.—A diastema between i^1 and i^2 ; i^4 larger than i^2 or i^3 ; c long, little curved; p^1 , p^3 , p^4 crowded, becoming successively larger; m^1 – m^3 becoming successively shorter anteroposteriorly (measured along outer face) and wider; m^4 normal for genus.

MEASUREMENTS.—Head and body, 128 mm.; tail, 98; hind foot (s.u.), 21; skull, basal length, 25.3; zygomatic breadth, 16.3; mastoid breadth, 11.6; nasals, 9.7×3.3 (combined); palatal length, 13.7; anterior palatal foramen, 2.6; length bulla, 2.9; crowns m^{1-3} , 5.1; crown dimensions of m^1 , 1.8×1.5 ; of m^2 , 1.8×1.8 ; of m^3 , 1.6×2.1 .

¹ Jentink, 1911, Notes Leyden Museum, XXXIII, pp. 236–237.

P. rona is based upon the type specimen only. The arrangement of its incisors and premolars suggests that it belongs in the subgenus *Antechinus*. It is, however, widely different from another *Antechinus* of New Guinea, namely *P. melanura*. Perhaps it comes closest to *P. naso* from the Hellwig Mts., Dutch New Guinea.

Phascogale tafa, new species

TYPE.—No. 104050, Amer. Mus. Nat. Hist.; female, adult; eastern slope of Mt. Tafa, Central Division of Papua, 2100 meters; May 25, 1933; collectors, Richard Archbold and A. L. Rand. The type is a skin and skull in good condition.

GENERAL CHARACTERS.—A mouse-like phascogale with long, bare-appearing muroid tail and large, leafy ears; skull with rather narrow muzzle, and bullae not especially enlarged; most closely related to *longicaudata*.

DESCRIPTION.—Pelage dense but rather short for a highland species, only 6–7 mm. on back; color a dull brownish gray due to sepia-colored hair tips lying over a dark fuscous under color; under parts dull grayish buff, with a faint cast of yellowish, except the inguinal area where the mammae (shown by collector in notes to be 2–2) are surrounded by hairs colored tawny or russet; feet and hands only slightly paler than back; ears light fuscous, semi-translucent, apparently capable of being folded or coiled as in *Marmosa simonsi*; tail light fuscous above, scarcely paler beneath.

SKULL.—Rather long, with zygomatic moderately and uniformly arched; post-orbital prominences not developed; nasals narrow, little widened posteriorly; rostrum somewhat elongate, blunt at the end; palate rather narrow; bullae moderate, their width slightly exceeding half of their distance apart.

DENTITION.—A slight diastema from i^1 to i^2 ; i^2 higher than i^3 or i^4 , but i^4 with longer crown than i^2 or i^3 ; c straight, sharp; p^1 , p^3 , p^4 graded from small to large, but a slight space between p^1 and p^2 ; outer faces of m^{1-3} subequal in length, their widths, however, increasing successively.

MEASUREMENTS.—Head and body, 134 mm.; tail, 145; hind foot (s.u.), 25.0; basal length, 29.7; zygomatic breadth, 17.3; interorbital breadth, 7.7; mastoid breadth, 13.1; nasals, 11.1×3.5 (combined); palatal length, 17.1 (no postnasal spine); length bullae, 3.1; crowns m^{1-3} , 6.4; crown length permanent p^4 , 1.5; crown dimensions of m^1 , 2.3×1.8 ; of m^2 , 2.3×2.2 ; of m^3 , 2.2×2.4 ; width of crown of m^4 , 2.4.

The nearest relative of this little animal is apparently *longicaudata* of the Aru Islands, described in 1866 by Schlegel and Müller.¹ That animal was also a female. No further discoveries of related specimens² were made until Thomas³ reported a phascogale (also female) which he referred to *longicaudata*, from Haveri, behind the Astrolabe range, 700 meters. Whether that specimen is referable to *longicaudata*, or to *tafa*, or constitutes yet a third race in its own right is yet to be determined.

¹ Schlegel and Müller, 1866, Ned Tijdschr. Dierk., p. 356.

² The *murex* group is not necessarily CLOSELY allied to *longicaudata*.

³ Thomas, 1897, Ann. Mus. Civ., Genova, (2) XVIII, p. 621.

Phascogale (Phascolosorex) dorsalis whartoni, new subspecies

TYPE.—No. 104046, Amer. Mus. Nat. Hist.; male, adult; eastern slope of Mt. Tafa, Central Division of Papua, 2070 meters; May 23, 1932; collectors, Richard Archbold and A. L. Rand. The type is a skin and skull in fair condition (right malar bone missing).

GENERAL CHARACTERS.—A single-striped phascogale of the subgenus *Phascolosorex* (diastema between i^1 and i^2 ; p^4 larger than p^3 ; rostrum slender), and most nearly like *P. dorsalis*, though of even smaller size.

DESCRIPTION.—Pelage dorsally, 8–9 mm. in length; dorsal color bone brown with light flecks of russet or tawny, overlaid scantily by longer black guard hairs. Median dorsal line entirely black, widest (8 mm.) on neck, extending from rostrum to rump and even onto base of tail; under parts from sayal brown to tawny, the hairs with concealed gray bases; transition to dorsal pelage gradual; ears short, middle of conch incised and folded, with short clothing of dark brown hairs; hands and feet with their fuscous hairs tipped with dull tawny; tail fuscous above and below, moderately haired (hairs though appressed reaching 5 mm.); tip of tail in type not white (white in paratypes). Claws of forefeet slightly larger than those of hind feet.

SKULL.—As indicated under "general characters." Frons raised, base of rostrum depressed; back of nasals moderately expanded; palate moderately long, compressed at level of p^1 ; bullae moderate in size, diameter slightly less than two-thirds their distance apart.

DENTITION.—As in *doriae* but very much smaller (no specimens of *dorsalis* have been available for examination).

MEASUREMENTS.—Head and body, 173 mm.; tail, 131; hind foot (s.u.), 25; skull, basal length, 36.7; zygomatic breadth, 21.0; nasals, 15.2×5.7 (combined); palatal length, 20.9; anterior palatal foramen, 4.3; length bullae, 3.5; crowns m^1 – 3 , 7.3; crown length permanent p^4 , 1.1; crown dimensions of m^1 , 2.5×1.6 ; of m^2 , 2.4×2.0 ; of m^3 , 2.3×2.3 ; width of m^4 , 2.4.

Besides the type there are in our collections two young adult females from Mt. Tafa (both with the tip of tail broken), and from Murray Pass, Wharton Range, an adult male with the terminal 18 mm. of the tail yellowish white.

It seems probable that when true *dorsalis* is rediscovered it will be found to occur at greater altitudes than the larger *doriae* (common in collections) does.